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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,808	08/21/2003	Shin Yamaguchi	241830US0	6184

22850 7590 03/03/2006

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

GITOMER, RALPH J

ART UNIT PAPER NUMBER

1655

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,808

Applicant(s)

YAMAGUCHI ET AL.

Examiner

Ralph Gitomer

Art Unit

1655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1,2 and 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The amendment received 2/2/06 has been entered and claims 1-22 are currently presented. Claims 1 and 2 are withdrawn from consideration.

Newly submitted claims 17-22 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

The new claims are directed to an apparatus and the previously considered claims are directed to a composition.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 17-22 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03. It is noted no product claims are found and the composition claims as presented are directed to an old composition.

There may be a number of related applications pending to this application. Please inform the examiner of any related applications, pending, allowed or abandoned.

In claim 3 line 2, "which is attached to a surface" is queried where contacting may be a more standard term. How a solution may be attached to anything is not seen.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 3-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. US 2004/0180008 A1 or 10/791,783. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present composition claims are broader than the claims of '783 which recite additional components.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ishibashi in view of Morikawa.

Ishibashi (EP 1 192 933 A1) with a publication date of April, 2002, entitled "Tooth Bleaching Compositions and Method of Bleaching Discolored Tooth" teaches in the abstract, bleaching compositions of titanium dioxide initiating photocatalyst action with light irradiation and chemical compounds that generate hydrogen peroxide and thickening agents. On page 4, any type of titanium dioxide may be used if it initiates the photocatalytic action with visible light, including anatase, rutile or brookite. It may be dispersed into water and a particle diameter of 1-500 nm is suitable in a concentration of 0.001 - 10% by weight. Additionally, any compound that generates hydrogen peroxide is included 35% by weight or less. Thickeners are discussed.

The claims differ from Ishibashi in that they specify the titanium dioxide is nitrogen doped.

Morikawa (6,835,688) entitled "Photocatalytic Material, Photocatalyst, Photocatalytic Article, and Method for the Preparation Thereof" teaches in column 10 last paragraph bridging to column 11, Ti-O-N photocatalytic material exhibits photocatalytic activity by incidence of visible light. and has some hydrophilic property. It can decompose organic substances with visible light and is markedly superior to titanium oxide photocatalyst in the ability to decompose organic substances. In column 11, the N gradually decreased toward the surface and only titanium oxide is exposed at the outmost surface. In column 17 line 47, it may be in the form of island, needle or mesh. In claim 29 the material is in a film and an organic compound is decomposed. Various grain sizes are taught in the patent.

It would have been obvious to one of ordinary skill in this art at the time the invention was made to employ the nitrogen doped titanium dioxide of Morikawa in the method of Ishibashi because Ishibashi teaches any kind of titanium dioxide can be employed and Morikawa teaches the same types of titanium dioxide as presently claimed is useful for bleaching. To employ a known composition for its known function with the expected results would have been obvious. In view of the present claims being directed to a composition, the composition is rendered obvious by the combination of the above references where the substitution of titanium dioxide with nitrogen doped titanium dioxide for bleaching would have been obvious for the advantages of nitrogen doped titanium dioxide as taught by Morikawa.

Regarding claim 11 directed to the carrier being a polyhydric alcohol, any known aqueous compatible carrier known for applying substances to teeth would have been obvious in view of the above references.

Regarding new claims 15 and 16, the present specification on page 19 teaches that both types of compounds are known. Regarding the amendments to claims 13 and 14, employing known dental bleaching agents for their known function with the expected results would have been obvious.

Applicant's arguments filed 2/2/06 have been fully considered but they are not persuasive.

Applicants argue that titanium dioxide requires UV light, not visible light, for bleaching. Nitrogen doped titanium dioxide does bleach with visible light. Morikawa does not describe bleaching teeth.

It is the examiner's position that the currently considered claims are directed to a composition and the composition is not novel and has been rendered obvious by the references cited above. The claimed feature of irradiating with visible light in dependent claims does not lend patentability to the nitrogen doped titanium because it is the composition itself which is claimed, not the method of using the composition. Morikawa was cited to teach the presently claimed bleaching agent for bleaching functions in general. To apply any known bleaching agent to bleach anything known to be desired to bleach with the expected result would have been obvious. No novelty is seen regarding applying a bleaching agent to teeth.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

This application contains claims 1 and 2 drawn to an invention nonelected with traverse in Paper No. 3. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

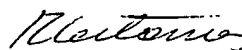
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ralph Gitomer whose telephone number is (571) 272-0916. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on (571) 272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ralph Gitomer
Primary Examiner
Art Unit 1655

RALPH GITOMER
PRIMARY EXAMINER
GROUP 1200